

CLAIMS

1. A network switch for a packet-based data communication network, comprising a plurality of ports for the reception and transmission of data packets and means for establishing a database for controlling the passage of data packets between the ports, the database comprising a data table for holding data entries each comprising a media access control address and an identification of a port, and a pointer table of which the entries each comprise a network address and an associated pointer to an entry in the said data table.

2. A network switch according to claim 1 wherein the pointers associated in said pointer table with network addresses which share a common media access control address in said switch all identify a single common entry in said data table.

3. A network switch according to claim 2 and including means for hashing network addresses of said packets to access said pointer table.

4. A method of operating a network switch in a packet-based data communication network, wherein the network switch has a multiplicity of ports each connected to a respective group of remote stations by way of an intermediate network device, the network switch responding to network addresses in packets received by the network switch to look up in a data table a media access control address for the respective intermediate device, said method comprising:

(a) responding to a network address of an incoming packet to access a pointer table of which the entries each include a network address and an address pointer, the address pointer identifying an entry in said data table, and

(b) causing the address pointers for all the network addresses of remote stations coupled to the switch by way of the same intermediate device to identify a single common entry for that device in said data table.

5. A method according to claim 2 wherein the step (a) includes hashing the network addresses to access the pointer table.

sub
a1

add
a2

add
B1

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